

Prophetic Remedies to COVID 19

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Prophet Muhammad (P.B.U.H) 1400 years ago, spread the knowledge of some benevolent six fruits, which are mentioned in the Holy Quran. These are considered as holy fruits and has great significance in Islamic history and culture. The fruits have more to it than the historical background; the limitless medicinal and phytochemical properties of these fruits can be a great cure for Covid-19 situations. It has potential in treating the symptoms of Covid-19 as well as reduce susceptibility from the infection.

Keywords: Covid-19; Fruits; Medications**Introduction**

The emergence of another human respiratory pathogen (Severe Acute Respiratory Syndrome Coronavirus-2) SARS-COV-2/ Covid-19 a global pandemic has terrorized and eliminated the lives of many.

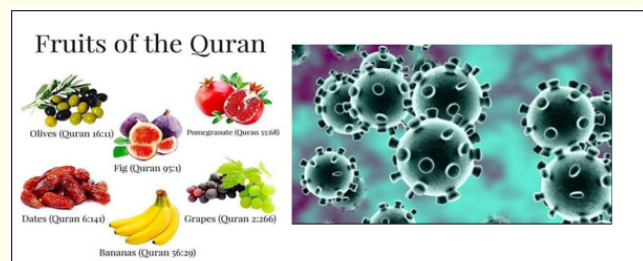
The total estimates vary of Covid-19 cases, approximately 6 million cases are registered, and some are yet to be discovered and thousands of deaths. This contagious virus has been affecting not only physically but also mentally and economically. It is posing a great threat to the well-being of society.

Many possible medications are used to treat the affected patients, and people are adhering to possible remedies to treat the infection and for precaution. There is ongoing research and production of Vaccines but not sufficient enough to reach the entire globe.

There are several types of research on the usage of plant metabolites for Covid-19. Traditional folklore medicines have been used for centuries to treat diseases from extracts of plants and fruits by application and consumption.

Islamic history is also rich in traditional folklore medicine. Arab scientists have worked on the pharmacological properties of the

fruits mentioned in the Holy Quran, and even modern-day science proves its benefits. It has been used for centuries for various purposes, and the properties of those fruits set the array for treatment and prevention of Covid-19. Proper usage of these fruits could eliminate the infection caused by the virus.

**Figure 1:** Fruits of the Quran and image of Coronavirus.**Coronavirus - COVID-19**

Coronaviruses (*Coronaviridae*) are enveloped R.N.A. viruses, they spread through mammals mostly and spreads respiratory diseases. The family of this separate virus originated in the 1960's. The most distinctive feature of this virus is the genomic size.

The shape of coronavirus is said to be pleomorphic somewhat spherical, virions are approximately 80 to 120 nm, the size varies for it 50 nm which is extremely small and goes up to 200 nm.

The peplomers/ spikes present on the surface of the coronavirus is either club shaped, pear shaped or petal shaped. It has a thin base that swells up to 10 nm at distal extremity. Some coronaviruses also have second set of projections that undergrows beneath the major peplomers which are 5 to 10nm long. These structures are now known as hemagglutinin-esterase HE proteins.

The Spike protein/S Glycoprotein, also known as E2 are the surface spikes proteins which is most prominent it acts as the mediator and helps in an attachment to the host cell in the viral-host membrane fusion. The S protein is large in size N-exo, C-endo transmembrane protein assembles into trimers to form the distinctive surface spikes of coronaviruses.

The Membrane Glycoprotein or the E1 is present ample in coronavirus and gives virion envelope its shape. The size of the M protein ranges from 25 to 30 kDa.

Envelope or E proteins are present in small constituents inside the virus and the nucleocapsid or N proteins binds with the genomic R.N.A. in the bead fashion it is reported to be 43 to 50 kDa in size. Its function is to bind with the viral R.N.A.

The genome of the coronavirus is extremely large in size, they are non-segmented mRNA molecules resembling eukaryotic mRNAs. It is infectious when incorporated in host cell.

Genome acts as an mRNA that is translated into the huge replicase polyprotein, which requires synthesis of ribosomal frame-shifting event. Replicase is the only translation product derived from the genome, all other ORFs also known as accessory proteins are expressed from sub genomic RNAs. The genome then serves as the template for replication and transcription. It plays a vital role in assembly, as progeny genomes are incorporated into progeny virions. The research and studies are still ongoing on Corona virus.

Coronavirus tend to have adverse effects on older adults and infants there are several symptoms of coronavirus. Some of the mild and moderate symptoms are mentioned below.

- Fever or chills
- Cough

- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

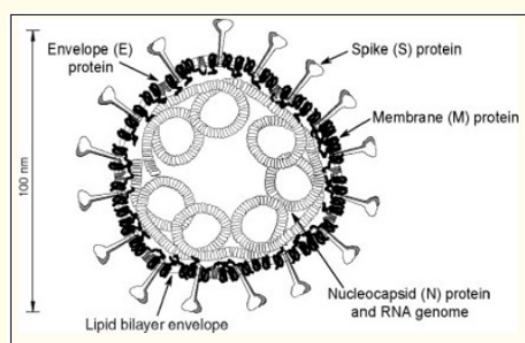


Figure 2: Adopted from article “The Molecular Biology of Coronaviruses”.

More adverse symptom is pneumonia that happens after the infection. The time frame between the infection and showing of the symptom is known as the incubation period. It usually takes 2-14 days for the symptoms to occur, depending upon the immunity of the person the symptoms that develop might be mild or severe. For some individuals symptoms are not visible.

People with diabetics, lungs and cardiovascular diseases and other health issues are more susceptible to the infection.

The six fruits of the holy Quran

The Holy Quran mentions specific six fruits, they are referred as “Fruits of Paradise” after several researches and scientific facts proven these fruits tend have high therapeutic and pharmacological factors.

The chemical constituents of these fruits can treat the possible affects of Covid-19 infection and prevention. The six fruits are mentioned below.

Bananas

Banana is also one of the six fruits mentioned in Holy Quran they are mentioned as fruits of paradise quoted as:

- “And [banana] trees layered [with fruit] (Quran 56:29)”.

It is considered as powerhouse fruit due to its magnificent benefits.

It is a herbaceous flowering plant belonging to genus *Musa* and family *Musaceae*. All the edible bananas are parthenocarpic, it is a

tropical fruit belonging to two main species *Musa acuminata Colla* and *Musa balbisiana Colla*. The hybrid known as *Musa x paradisiaca L.* is also available from these two species.

Banana is now cultivated in 135 countries and is considered a staple food, medicinal properties of banana are numerous. Rich in nutrients and minerals it also has essential bioactive phytochemicals which is known to be anti-inflammatory.

Chemical composition of banana

Component or parameter	Unit	Sweet banana pulp				Plantain pulp	
		Ripe ^a	Unripe ^b	Dried ^c	Dehydrated or flour ^d	Unripe ^e	Ripe
Energy	Kcal	89	110 ^b	257	340	91	122 ^e
Water	g	74	69 ^b	28	3.0	63	65 ^e
Protein	g	1.1	1.4 ^b	3.0	3.9	0.8	1.3 ^e
Total lipid	g	0.3	0.2 ^b	1.0	1.8	0.1	0.37 ^e
Carbohydrate	g	21.8	28.7 ^b	63.0	82.1	24.3	32 ^e
Dietary fibre	g	2.0	0.5 ^b	5.5	7.6	5.4	2.0–3.4 ^e
Na	mg	1.0		8.0	3.0		4.0 ^e
K	mg	385.0		1150.0	1491.0		500 ^e
Ca	mg	8.0	8 ^b	20.0	22.0	7	3.0 ^e
Mg	mg	30		90.0	108.0	33	35.0 ^e
P	mg	22		75.0	74.0	35	30.0 ^e
Fe	mg	0.42	0.9 ^b	1.3	1.15	0.5	0.6 ^e
Cu	mg	0.11		0.4	0.39	0.16	
Zn	mg	0.18		0.5	0.61	0.1	
Mn	mg	0.2			0.57	15	
Eq. β-carotene	µg	68.0	48.3 ^b	150.0	183.0	0.03–1.20	390–1035 ^d
Vitamin E	mg	0.29		0.6		–	
Vitamin C	mg	11.7	31 ^b	4.0		20	20 ^d
Thiamin	mg	0.04	0.04 ^b	0.1	0.18	0.05	0.08 ^d
Riboflavin	mg	0.07	0.02 ^b	0.18	0.24	0.05	0.04 ^d
Niacin	mg	0.61	0.6 ^b	2.0	2.8	0.7	0.6 ^d
Panthenic acid	mg	0.28				0.37	
Vitamin B6	mg	0.47				–	
Total Folate	µg	23.0				0.016	
Biotin	µg	2.6				–	
Isoleucine	mg	34.0			167.0		
Leucine	mg	71.0			359.0		
Lysine	mg	50.0			162.0		
Methionine	mg	14.0			74.0		
Cystine	mg	20.0			63.0		
Phenylalanine	mg	41.0			201.0		
Tyrosine	mg	26.0			121.0		
Threonine	mg	36.0			171.0		
Tryptophan	mg	13.0					
Valine	mg	49.0			282.0		
Arginine	mg	57.0			176.0		
Histidine	mg	86.0			333.0		
Alanine	mg	43.0			222.0		
Aspartic acid	mg	120.0			503.0		
Glutamic Acid	mg	115.0			399.0		
Glycine	mg	41.0			190.0		
Proline	mg	43.0			229.0		
Serine	mg	49.0			226.0		
Dopamine	mg	65.0					
Serotonine	mg	3.3				45 ^e	76 ^e
Thiamine	mg	0.7					
Malic acid	meq	6.20 ^f	1.36 ^e				
Citric acid	meq	2.17 ^e	0.68 ^e				
Oxalic acid	meq	1.37 ^e	2.33 ^e				
Other acids	meq	0.17 ^e	0.19 ^e				

^a CIQUAL – CNEVA (1993).
^b Anonymous (1981).
^c Marriott and Lancaster (1983).
^d Woolfe (1992).
^e Lassoudière (2007).

Figure 3: Minerals and Vitamins Present in Banana.

The entire fruit is a very rich in anti-oxidant and anti-inflammatory properties that could help to reduce the symptoms of Covid-19

Zinc Vitamin B12, Vitamin E, Vitamin C and phenolics present in banana are excellent source of antioxidants, these immunity boosting minerals and vitamins will help to reduce the susceptibility of Covid and fight against it.

Fiber rich banana is also a very potential fruit in treating digestive issues like Diarrhea and fatigue.

Ferulic acid is another essential compound present in the fruit that has antioxidant, antimicrobial, anti-inflammatory, antiallergic, anticarcinogenic antiviral properties that could treat other symptoms of Covid-19.

Olives

In the Holy Quran there is an entire recitation on Olives it is called Zaitoon in Arabic. It is considered as a blessed tree and a blessed fruit quoted as:

- “By the fig and the olive. (Quran 95:1)”.
- “And olive and palm trees. (Quran 80:29)”.
- “And a tree (olive) that springs forth from Mount Sinai, that grows oil, and (it is a) relish for the eaters. (Quran 23:20)”.

Olives (*Olea europaea L.*) belongs from the family of dicotyledons, the genus *Olea* is derived from Greek and Latin and has 30 species but *Olea Europaea L.* is the only species used as food.

Olive tree is the most ancient cultivated tree almost 7000 years ago and is also mentioned in Greek literature for the usage of its oils for body health.

Widely available in Mediterranean regions and almost all over the world except Antarctic, subtropical and temperate regions and due to its salutary properties. Different parts of the olive tree are used in traditional medicine.

Olives are not consumed as natural fruits due to its bitter taste rather eaten more as oils and table olives.

Chemical composition of Olive

Chemical Structure of Olive	
% Water	50-70
% Fat	18-35
% Reducing sugar	2-6
% Total sugar	18
% Protein	1-3
% Mineral	1-5
% Cellulose	1.5-2
% Hydrocarbons	0.8-1
% Polifenoller	0.5-0.8
% Tokoferoller	0.3-0.8
% Fibre	1-3
% Saturated fatty acids	12-20
% Polyunsaturated fatty acids	5-18
% Monounsaturated fatty acid	60-80
% Phosphorus	0.02-0.25
% Potassium	0.5-3.4
% Sodium	0.01-0.20
% Calcium	0.02-0.20
% Magnesium	0.01-0.06
% Sulfur	0.01-0.13
Boron mg/kg	4-22
Copper mg/kg	0.3-5.8
Iron mg/kg	3-95
Manganese mg/kg	0.91-5.5
Zinc mg/kg	1.5-33.0

Figure 4: Adopted from article “Table Olives and Our Health and Quality’ by Şahnur Irmak.

- The *in-vivo* and *in-vitro* pharmacological researches and studies states that there are compounds present in olives that are antidiabetic, anticonvulsant, antioxidant, anti-inflammatory, immunomodulatory, analgesic, antimicrobial, antiviral, anti-hypertensive, anticancer, antihyperglycemic, antinociceptive, gastroprotective, and wound healing properties.

- These properties have the ability to treat the symptoms of Covid-19 and prevent from it.
- Oleic acid is one of the major constituents of olive, is a monosaturated fatty acid almost 74 percent is an anti-inflammatory and reduce risk of heart attack.
- Vitamin E present in Olive oil is a powerful antioxidant that will help to enhance the immune system to fight against infectious diseases.
- Iron present in black olives helps in red blood cell production hence reducing anemia and weakness.
- Calcium present is also helpful to maintain bone and muscle health as well as nerve function.
- Oils of the seeds are taken as laxative to treat irregular bowel movements and as balm for inflammation.
- Decoctions made from dried leaves and fruit are consumed orally to treat diarrhea, and urinary tract infections, stomach and intestinal diseases, and as mouth cleanser.
- It is also used for respiratory discomforts. Boiled extract of the leaves of olives is consumed orally to treat asthma, infused olive leaves drink is consumed to reduce fever and infusions of olive leaves are also used to relief sore throat.

Dates

Dates are one of the most favorite fruit of the Prophet Muhammad (P.B.U.H) and used by the muslims to break the fast during the holy month of Ramadan, it is mentioned several times in the Holy Quran. It is quoted as:

- “Or you have a garden of date-palms and grapes, and cause rivers to gush forth in their midst abundantly. (Quran 17:91)”.
- “And tall date-palms, with ranged clusters (Quran 50:10)”.
- “Therein are fruits, date-palms producing sheathed fruit-stalks (enclosing dates). (Quran 55:11)”.

This marvelous desert fruit has extensive medicinal values and is a booming instant energy providing food.

Dates (*Phoenix dactylifera*) belongs from palm family *Arecaceae*, or *Palmae*. It grows in clusters and harvested in bunches.

It is also one of the old cultivated trees approximately 6000 years ago and has a lot of historical background mentioned in several religious books, Jews consider it a holy fruit.

It has 200 varieties and is a staple food in middle eastern regions. The most common varieties are Khodry, Khalas, Ruthana, Sukkary, Sefri, Segae, Ajwa, Hilali and Munifi. Each has its own me-

dicinal properties. Ajwa date is cultivated only in Madinah Al Munawwara-Saudi Arabia, this fruit has a lot of Islamic value it plays a protective role against hepatic toxicity.

Dates are known to be versatile because of its nutritional values it has all the essential minerals and vitamins provided by the balanced diet. The fruit and even the flowers of it are consumed in various forms like salads and sweet dishes.

As per researches and studies dates have antioxidant, anti-inflammatory properties that could be helpful in treating the Symptoms of Covid-19 and prevent from infection.

Chemical composition of dates

Dates - Nutritional Facts per 100 g		
Nutrients	mg	Percentage
Folates	15 µg	4%
Niacin	1,610 mg	10%
Pantothenic acid	0.805 mg	16%
Pyridoxine	0.249 mg	19%
Riboflavin	0.060 mg	4.5%
Thiamin	0.050 mg	4%
Vitamin A	149 IU	5%
Vitamin C	0 mg	0%
Vitamin K	2.7 µg	2%
Sodium	1 mg	0%
Potassium	696 mg	16%
Calcium	64 mg	6.5%
Copper	0.362 mg	40%
Iron	0.90 mg	11%
Magnesium	54 mg	13%
Manganese	0.296 mg	13%
Phosphorus	62 mg	9%
Zinc	0.44 mg	4%



Figure 5: Adopted from article “Properties and Benefits of Dates” by Marius Lixandru.

- Dates are also a good source of fiber, the fiber present in dates helps to ease bowel movements.

Chemical composition of fig

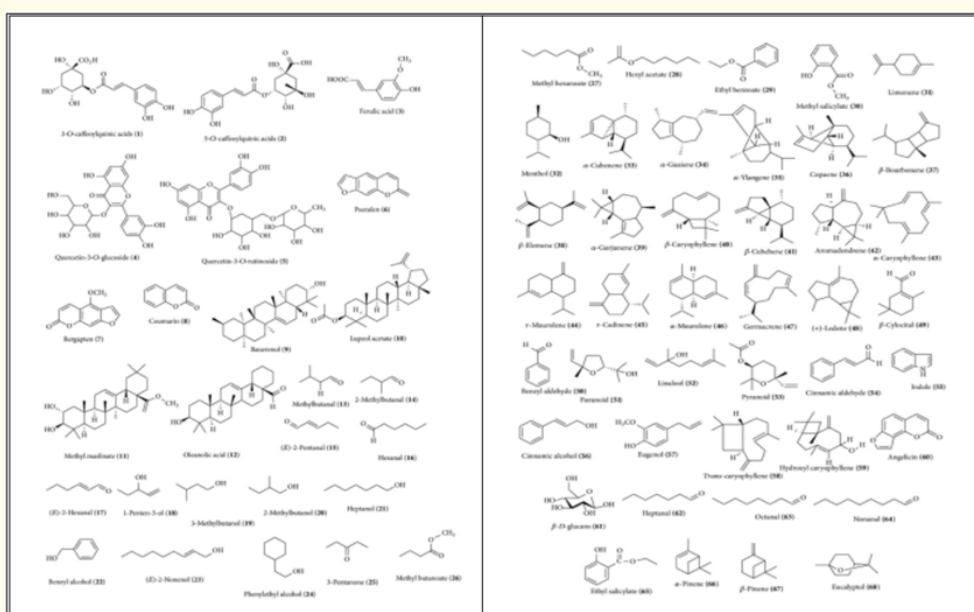


Figure 6: Adopted from article “Ficus carica L. (Moraceae): Phytochemistry, Traditional Uses and Biological Activities”.

- Carotenoids present in dates helps to improve heart health and reduces the risk of heart stroke.
- Flavonoids present in dates have high antioxidant properties it elevates the defense mechanism of the immune system hence preventing infectious diseases like Covid-19.
- Phenolic acid present in dates are anti-inflammatory, several inflammatory agents plays a vital role in the development of various defensive mechanisms inside the body.
- The transcription factors L.O.X. and NF-kB play an important role in maintaining inflammation in the body.
- Regular consumption of dates will also reduce body fatigue and weakness caused by the infectious disease Covid-19.

Figs

Figs are another biodiverse blessed fruit mentioned in the Holy Quran.

- “By the fig and the olive and the Mount Sinai and this safe country (Makkah)! Indeed, We created human with fairest stature. (95:1-4)”.

Figs *Ficus carica L.* a Mediterranean fruit are abundant with nutritious and medicinal values, widely used in kitchen recipes as well as in traditional medicine.

Ficus carica L. is a vital member of genus over 1400 species. The phytochemical properties present in the barks, leaves and fruits of fig have immense medicinal benefits. It is known to treat anti-inflammatory, respiratory, cardiovascular and metabolic disorders.

The phenolic compounds like ferulic acid and (C3R) present in figs have high antioxidant properties that fortifies immunity. Cyanidin-3-O-rutinoside (C3R) is present in large amount almost 95 percent and is a powerful antioxidant compound.

The fruit is also rich in carbohydrates, minerals, vitamins, calcium, zinc and dietary fiber which helps to provide energy and good digestion.

The extracts from leaves and fruits are used as laxatives and also used in treating diarrhea, loss of appetite, cough sore throat and bronchial problems which are some of the symptoms of Covid-19 infections.

Pomegranates

Pomegranate is another magical fruit mentioned three times in

Chemical composition of pomegranate

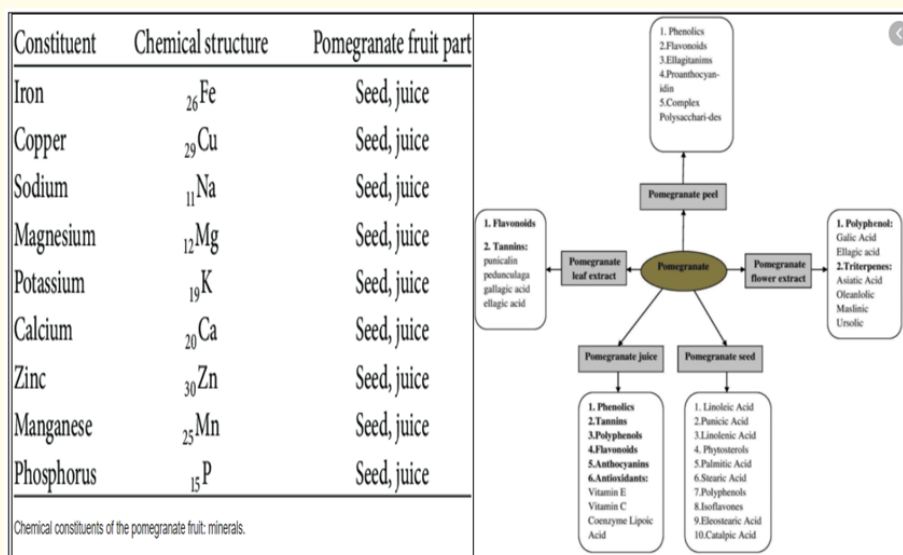


Figure 7: Adopted from article "Pomegranate as a possible treatment in reducing risk of developing wound healing, obesity, neurodegenerative disorders, and diabetes mellitus".

- Pomegranates are rich in punicalagins which is high in antioxidant and anti-inflammatory, properties.
- The fruit also contains Vitamin C which is another potent antioxidant. Moreover fiber present in pomegranate improves digestion.
- Plant extracts are used to treat various diseases like diarrhea, respiratory problems etc. Fruit extracts used to treat fever.

the Holy Quran. Quoted as:

- "Therein will be fruits and dates and pomegranates. (Quran 55:68)".

Pomegranate (*Punica protopunica* and *Punica grantum*.) is a small fruit bearing tree planted as edible fruit or ornamental tree. *Punica grantum* is cultivated worldwide but *Punica protopunica* is only found in islands of Republic of Yemen.

It is widely found in Mediterranean regions also known as Persian fruit mostly found in Iran and also cultivated in Pakistan, Bangladesh, India and Russia.

The fruit is known to be rich in Anti-inflammatory, Antiviral, antioxidant as well as other medicinal properties.

- Hence the nutritional benefits of this fruit might be helpful in treating the symptoms of Covid-19 and prevent from the infection.

Grapes

Grapes are another nutritious fruit mentioned in the Holy Quran quoted as:

- “By means of it We produce gardens of dates and grapes for you, in which there are many fruits for you and from which you eat. (23:19)”.
- “And We have made therein gardens of date-palms and grapes, and We have caused springs of water to gush forth therein. (Quran 36:34)”.

Grapes (*L. Vitis vinifera*) are a historical fruit known to be cultivated approximately around 5000 BC in Asia and recognized worldwide 2000 years ago. The whole fruit, plant seeds are high in medicinal values.

This alimantal fruit are rich in antioxidants and known to have antioxidant and anti-inflammatory properties which will help to prevent the infection from Covid-19.

Chemical composition of grapes

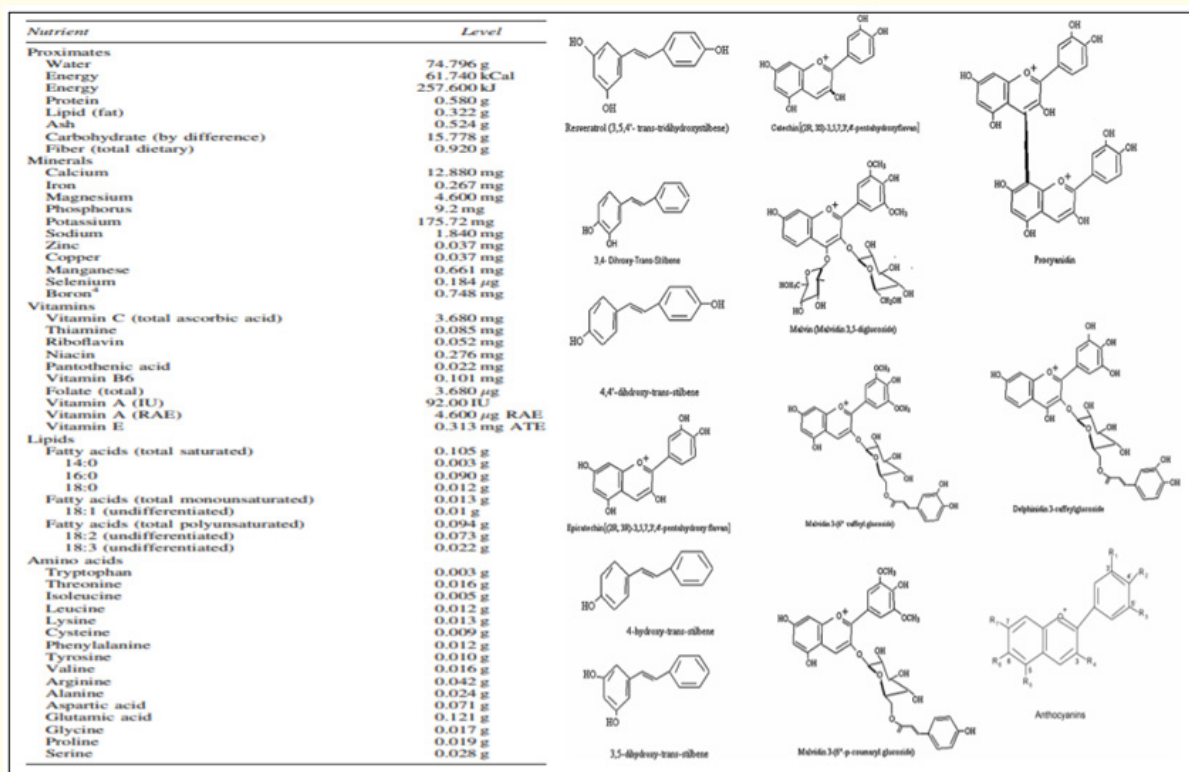


Figure 8: Adopted from article "Biological and Medicinal Properties of Grapes and Their Bioactive Constituents: An Update".

Resveratrol (3,5,40-trans-trihydroxystilbene) is an antioxidant rich compound found in grapes prevents from oxidative stress other phytochemicals presents in skin and seeds of grapes like gallic acid, catechins and epicatechins have antioxidant capacity and anti-inflammatory.

Grapes are also abundant in Vitamin C&E which increases the defence mechanism of the immune system in the body. It also contains good source of carbohydrates, phosphorus, zinc and fibers etc. Fibers are good in treating diarrhea which is one of the symptoms of Covid-19 [1-20].

Conclusion

Elaborated research and studies indicate the fruits mentioned above have tremendous beneficial properties like enhancing the defence mechanism of humans and reducing inflammation with various other disorders in a healthy proportion; a person can absorb its nutritious properties by adequate usage and consumption.

The phytochemical and medical properties of bananas, dates, olives, figs, pomegranates and grapes support the treatment of post Covid-19 infected patients, as well as infected patients with mild and moderate symptoms going through medications, could use them to enhance the recovery.

People susceptible to Covid-19 could also use as a preventive measure from any future Covid-19 infections until the vaccines are available and could also use in future for betterment and well-being.

Future scope of research

- Detailed research on the affects of dates, pomegranates, olives, figs and grapes on Coronavirus needs to be conducted.
- Further Pharmacological studies on the usage of the fruit extracts with other constituents to treat Covid-19.

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